

FILE NUMBER 9 -- IFNB Transmitting Earth Station Data, "AIIIByyy.xxx":

where "xxx" = "001" for the first satellite,
 = "002" for the second satellite, etc., and
 "yyy" = "001" for first receiving satellite beam on each
 satellite,
 = "002" for second receiving satellite beam on
 each satellite, etc.

Definition	Mnemonics Format	Example
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CHARACTERISTICS OF THE ANTENNA

ADD/MOD/SUP of the antenna	AMS01 c3	ADD
Associated satellite receiving beam designation	SRBEM c3	UV1
Old beam designation (if changed)	SRBOD c3	

EARTH STATION ANTENNA CHARACTERISTICS

Earth stn. antenna maximum isotropic gain (dBi)	TESGN ###.#	53.1
Antenna half-power beamwidth (degrees)	TESBM ###.##	0.37
Polarization	TESPL c5	?????
Is antenna radiation pattern diagram included?	TESRD c1 (Y,N)	Y
Radiation reference pattern	TESRP c12	REC465-1

INFORMATION COMMON TO THE FOLLOWING LISTS OF ASSIGNED FREQUENCIES OF THIS ANTENNA

Date of bringing into use	TESDT mm/dd/year	12/31/1991
Operating agency or company	TESCO c80	Company Name
Administration responsible for the station	TESAD c3	USA
Special section number (AR11/A/...) (RR1042)	TE11A c11	AR11/A/1234
Special section number (AR11/C/...) (RR1060)	TE11C c11	AR11/C/2345
Special section number (AR14/C/...) (RR1610)	TE14C c11	AR14/C/943
Other special section number (1 of 5 possible)	TES01 c11	AR11/A/1993
Other special section number (2 of 5 possible)	TES02 c11	AR11/C/299
Other special section number (3 of 5 possible)	TES03 c11	AR11/A/199
Other special section number (4 of 5 possible)	TES04 c11	AR11/C/9936
Other special section number (5 of 5 possible)	TES05 c11	AR11/A/193
Type of coordination agreement reached (1 of 5)	TERR1 c6	RR1107
Type of coordination agreement reached (2 of 5)	TERR2 c6	RR1060
Type of coordination agreement reached (3 of 5)	TERR3 c6	RR1610
Type of coordination agreement reached (4 of 5)	TERR4 c6	RR----
Type of coordination agreement reached (5 of 5)	TERR5 c6	RR----
List of countries with which coordination agreement has been reached (3-ltr symbols) (1 of 5)	TECA1 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-ltr symbols) (2 of 5)	TECA2 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-ltr symbols) (3 of 5)	TECA3 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-ltr symbols) (4 of 5)	TECA4 c30	---,---
List of countries with which coordination agreement has been reached (3-ltr symbols) (5 of 5)	TECA5 c30	---,---

**FILE NUMBER 9 -- IFRB Transmitting Earth Station Data, "AIIIByyy.xxx",
continued:**

Definition	Mnemonics	Format	Example
Type of coordination agreement sought (1 of 5)	TERS1	c6	RR1107
Type of coordination agreement sought (2 of 5)	TERS2	c6	RR----
Type of coordination agreement sought (3 of 5)	TERS3	c6	RR----
Type of coordination agreement sought (4 of 5)	TERS4	c6	RR----
Type of coordination agreement sought (5 of 5)	TERS5	c6	RR----
List of countries with which coordination agreement has been sought (3-ltr symbols) (1 of 5)	TECS1	c30	CUB,BHA,HTI
List of countries with which coordination agreement has been sought (3-ltr symbols) (2 of 5)	TECS2	c30	---,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (3 of 5)	TECS3	c30	---,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (4 of 5)	TECS4	c30	---,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (5 of 5)	TECS5	c30	---,---

CHARACTERISTICS COMMON TO THE FOLLOWING LIST OF ASSIGNED FREQUENCIES

Class of station code (no. 1 of 2 possible)	CSTE1	c2	TC
Class of station code (no. 2 of 2 possible)	CSTE2	c2	TC
Nature of service code (no. 1 of 2 possible)	TENS1	c2	CV
Nature of service code (no. 2 of 2 possible)	TENS2	c2	CV
Assigned frequency band (bandwidth) (kHz)	TESBW	#####	36000

EMISSIONS APPLICABLE TO THE ASSIGNED FREQUENCIES LISTED BELOW

Emission designation (repeats 1-99)	TEE01	c9	36MOF9WXF
Total Peak Power (dBW) (repeats 1-99)	TEP01	##.#	30.0
Maximum power density (dBW/Hz) (repeats 1-99)	TED01	##.#	-35.0

LIST OF ASSIGNED FREQUENCIES HAVING THE ABOVE COMMON CHARACTERISTICS (repeats)

ADD/MOD/SUP of the frequency assignment (repeats 1-99)	TEW01	c3	ADD
Assigned frequency with units [(k/M/G)Hz] (repeats 1-99)	TEF01	##### c3	5945.0 MHz
IFRB identification number for modifications/suppression (repeats 1-99)	TEX01	c9	?????????

FILE NUMBER 10 -- IFRB Receiving Earth Station Data, "AIIICyyy.xxx":

where "xxx" = "001" for the first satellite,
 = "002" for the second satellite, etc., and
 "yyy" = "001" for first receiving satellite beam on
 each satellite,
 = "002" for second receiving satellite beam on
 each satellite, etc.

Definition	Mnemonics Format	Example
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CHARACTERISTICS OF THE ANTENNA

ADD/MOD/SUP of the antenna	AMS02 c3	ADD
Associated satellite transmitting beam designation	STBEM c3	DH1
Old beam designation (if changed)	STBOD c3	

EARTH STATION ANTENNA CHARACTERISTICS

Earth station antenna maximum isotropic gain (dBi)	RESGN ###.#	51.2
Antenna half-power beamwidth (degrees)	RESBM ###.##	0.47
Polarization	RESPL c5	?????
Is antenna radiation pattern diagram included?	RESRD c1 (Y,N)	Y
Radiation reference pattern	RESRP c12	REC465-1

INFORMATION COMMON TO THE FOLLOWING LISTS OF ASSIGNED FREQUENCIES OF THIS ANTENNA

Date of bringing into use	RESDT mm/dd/year	12/31/1991
Operating agency or company	RESCO c80	Company Name
Administration responsible for the station	RESAD c3	USA
Special section number (AR11/A/...) (RR1042)	RE11A c11	AR11/A/1234
Special section number (AR11/C/...) (RR1060)	RE11C c11	AR11/C/2345
Special section number (AR14/C/...) (RR1610)	RE14C c11	AR14/C/943
Other special section number (1 of 5 possible)	RES01 c11	AR11/A/1993
Other special section number (2 of 5 possible)	RES02 c11	AR11/C/299
Other special section number (3 of 5 possible)	RES03 c11	AR11/A/199
Other special section number (4 of 5 possible)	RES04 c11	AR11/C/9936
Other special section number (5 of 5 possible)	RES05 c11	AR11/A/193
Type of coordination agreement reached (1 of 5)	RERR1 c6	RR1107
Type of coordination agreement reached (2 of 5)	RERR2 c6	RR1060
Type of coordination agreement reached (3 of 5)	RERR3 c6	RR1610
Type of coordination agreement reached (4 of 5)	RERR4 c6	RR----
Type of coordination agreement reached (5 of 5)	RERR5 c6	RR----
List of countries with which coordination agreement has been reached (3-ltr symbols) (1 of 5)	RECA1 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-ltr symbols) (2 of 5)	RECA2 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-ltr symbols) (3 of 5)	RECA3 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-ltr symbols) (4 of 5)	RECA4 c30	---,---

FILE NUMBER 10 -- IFRB Receiving Earth Station Data, "AIIICyyy.xxx", continued:

Definition	Mnemonics	Format	Example
List of countries with which coordination agreement has been reached (3-ltr symbols) (5 of 5)	RECA5	c30	----,---
Type of coordination agreement sought (1 of 5)	RERS1	c6	RR1107
Type of coordination agreement sought (2 of 5)	RERS2	c6	RR----
Type of coordination agreement sought (3 of 5)	RERS3	c6	RR----
Type of coordination agreement sought (4 of 5)	RERS4	c6	RR----
Type of coordination agreement sought (5 of 5)	RERS5	c6	RR----
List of countries with which coordination agreement has been sought (3-ltr symbols) (1 of 5)	RECS1	c30	CUB,BHA,HTI
List of countries with which coordination agreement has been sought (3-ltr symbols) (2 of 5)	RECS2	c30	----,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (3 of 5)	RECS3	c30	----,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (4 of 5)	RECS4	c30	----,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (5 of 5)	RECS5	c30	----,---

CHARACTERISTICS COMMON TO THE FOLLOWING LIST OF ASSIGNED FREQUENCIES

Class of station code (no. 1 of 2 possible)	CSRE1	c2	TC
Class of station code (no. 2 of 2 possible)	CSRE2	c2	TC
Nature of service code (no. 1 of 2 possible)	REMS1	c2	CV
Nature of service code (no. 2 of 2 possible)	REMS2	c2	CV
Assigned frequency band (bandwidth) (kHz)	RESBW	#####	36000
Receiving system noise temperature (Kelvin)	RESNT	####	85

EMISSIONS RECEIVED BY THE ASSIGNED FREQUENCIES LISTED BELOW

Emission designation (repeats 1-99)	REE01	c9	36MOF9WXF
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LIST OF ASSIGNED FREQUENCIES HAVING THE ABOVE COMMON CHARACTERISTICS

ADD/MOD/SUP of the frequency assignment (repeats 1-99)	REW01	c3	ADD
Assigned frequency with units [(k/M/G)Hz] (repeats 1-99)	REF01	#####.##### c3	3720.0 MHz
IFRB identification number for modifications/suppression (repeats 1-99)	REX01	c9	?????????

Attachment 4

SPACE STATIONS USED FOR DOMESTIC AND INTERNATIONAL SERVICES

The purpose of this attachment is to describe the medium, format, and data structure for the submission of space station network data for the international coordination of USA space stations. This structure is applicable to all space stations licensed by the Common Carrier Bureau of the FCC and to all satellite networks for which the FCC is responsible for IFRB notification. This includes satellite networks used for US domestic as well as international communications.

Description of Data Medium for space station operators:

Submissions of data for space stations shall be provided using 3-1/2 inch magnetic diskettes, formatted by MS/DOS 2.0 or higher. Both Double-Density (720 kbytes) and High-Density (1.44 Mbytes) diskettes are acceptable. The format of all space station data files shall be ascii.

For bulk filings of numerous space stations networks, other higher volume media might be arranged. The use of media other than 3-1/2 inch DOS diskettes, however, must be coordinated with the FCC staff on an individual basis.

Description of Data Files containing space station data:

The data elements for the space station submissions are grouped logically into 10 file formats. These files are shown in figure 2 and are listed here:

<u>File Name</u>	<u>Description of Data</u>	<u>Required/Optional</u>
1. AI1A.DAT	General Space Station Network Data	Required
2. AI1B1.xxx	RSS Antenna Beam Details (Beam Data & Coordination Agreements)	Required
3. AI1B2.xxx	RSS Antenna Beam Common Information (Emissions, Stations, & Frequencies)	Required
4. AI1C1.xxx	TSS Antenna Beam Details (Beam Data & Coordination Agreements)	Required
5. AI1C2.xxx	TSS Antenna Beam Common Information (Emissions, Stations, & Frequencies)	Required
6. AI1D1.DAT	Satellite Transponder Strapping Table	Required
7. AI1D2.DAT	Overall Equivalent link noise temperature and transmission gains	Required
8. FOOTPRNT.xxx	RSS & TSS antenna gain contours (footprints)	Required
9. RADPATRN.xxx	RSS & TSS antenna radiation patterns	Optional
10. GANVSORB.xxx	RSS & TSS Estimated antenna gain vs. orbit longitude	Optional

NOTE: RSS = "Receiving Space Station", TSS = "Transmitting Space Station",
RES = "Receiving Earth Station", TES = "Transmitting Earth Station".

Naming of Data Files:

In the table above, several of the file names (files 2, 3, 4, 5, 8, 9, and 10) have a '*.xxx' suffix on the file name. More than one (1) file of these formats will be provided for a given space station network. This '*.xxx' suffix refers to the individual satellite antenna beams. Use '*.001' for the first satellite antenna beam, '*.002' for the second satellite antenna beam, etc.

As an example, consider a typical domestic satellite that operates in both 4/6 GHz and 12/14 GHz bands. Assume that there are two (2) 6 GHz uplink beams, two (2) 14 GHz uplink beams, three (3) 4 GHz downlink beams, and four (4) 12 GHz downlink beams. The following data files would be provided for this network:

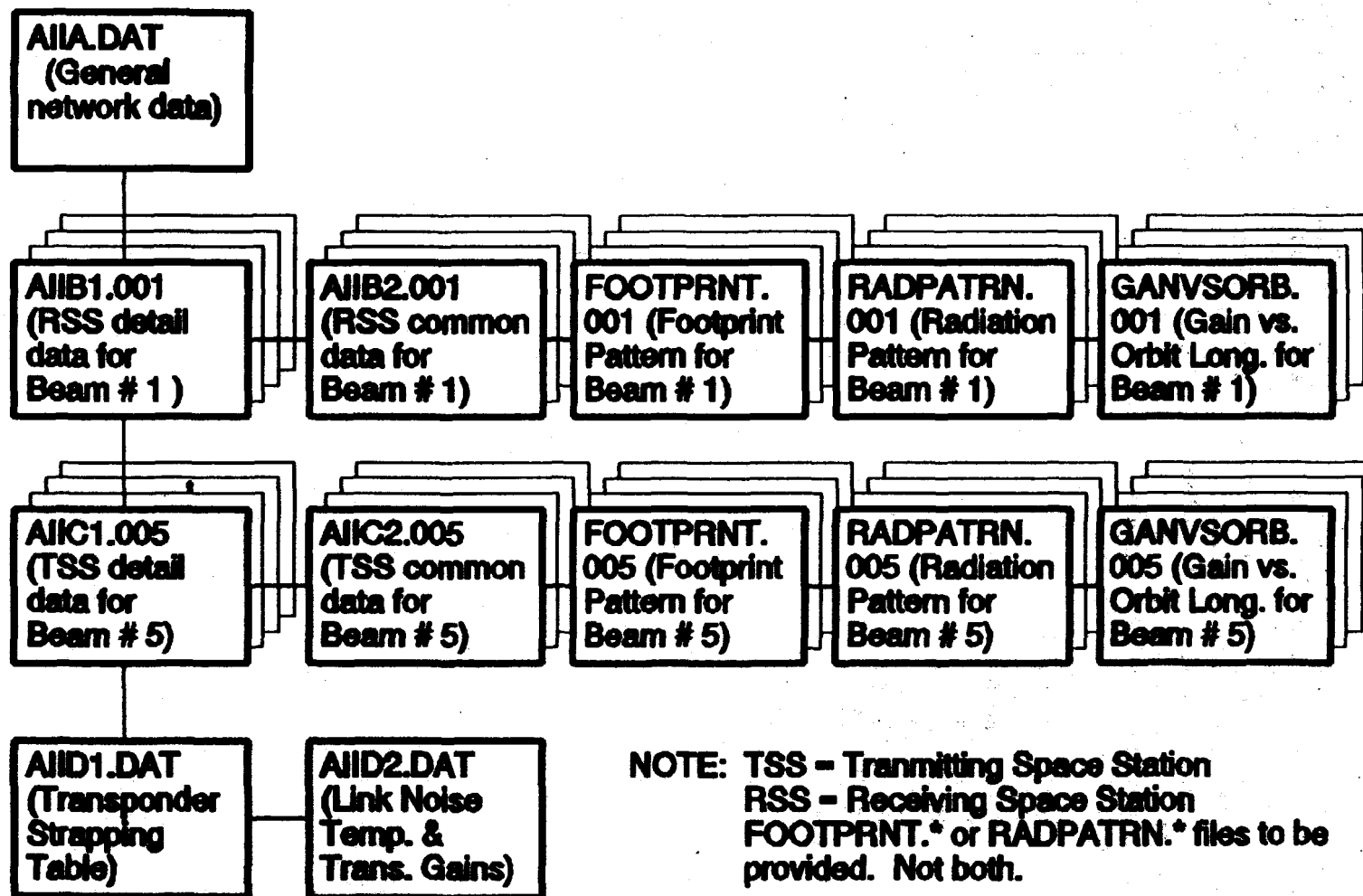
1. AIIA.DAT -- General space station network data
2. AIIB1.001 -- 6 GHz horizontal uplink beam
3. AIIB2.001 -- 6 GHz horizontal uplink beam
4. FOOTPRNT.001 -- 6 GHz horizontal uplink beam footprint pattern
5. AIIB1.002 -- 6 GHz vertical uplink beam
6. AIIB2.002 -- 6 GHz vertical uplink beam
7. FOOTPRNT.002 -- 6 GHz vertical uplink beam footprint pattern
8. AIIB1.003 -- 14 GHz horizontal uplink beam
9. AIIB2.003 -- 14 GHz horizontal uplink beam
10. FOOTPRNT.003 -- 14 GHz horizontal uplink beam footprint pattern
11. GANVSORB.003 -- 14 GHz horizontal uplink beam Gain vs. Orbit Long.
12. AIIB1.004 -- 14 GHz vertical uplink beam
13. AIIB2.004 -- 14 GHz vertical uplink beam
14. FOOTPRNT.004 -- 14 GHz vertical uplink beam footprint pattern
15. GANVSORB.004 -- 14 GHz vertical uplink beam Gain vs. Orbit Long.
16. AIIC1.005 -- 4 GHz horizontal downlink CONUS beam
17. AIIC2.005 -- 4 GHz horizontal downlink CONUS beam
18. FOOTPRNT.005 -- 4 GHz horizontal downlink CONUS beam footprint pattern
19. AIIC1.006 -- 4 GHz vertical downlink CONUS beam
20. AIIC2.006 -- 4 GHz vertical downlink CONUS beam
21. FOOTPRNT.006 -- 4 GHz vertical downlink CONUS beam footprint pattern
22. AIIC1.007 -- 4 GHz horizontal downlink SPOT beam
23. AIIC2.007 -- 4 GHz horizontal downlink SPOT beam
24. FOOTPRNT.007 -- 4 GHz horizontal downlink SPOT beam footprint pattern
25. AIIC1.008 -- 12 GHz horizontal downlink CONUS beam
26. AIIC2.008 -- 12 GHz horizontal downlink CONUS beam
27. FOOTPRNT.008 -- 12 GHz horizontal downlink CONUS beam footprint pattern
28. AIIC1.009 -- 12 GHz vertical downlink CONUS beam
29. AIIC2.009 -- 12 GHz vertical downlink CONUS beam
30. FOOTPRNT.009 -- 12 GHz vertical downlink CONUS beam footprint pattern
31. AIIC1.010 -- 12 GHz horizontal downlink EAST HALF-CONUS beam
32. AIIC2.010 -- 12 GHz horizontal downlink EAST HALF-CONUS beam
33. FOOTPRNT.010 -- 12 GHz horizontal downlink EAST HALF-CONUS footprint
34. AIIC1.011 -- 12 GHz horizontal downlink WEST HALF-CONUS beam
35. AIIC2.011 -- 12 GHz horizontal downlink WEST HALF-CONUS beam
36. FOOTPRNT.011 -- 12 GHz horizontal downlink WEST HALF-CONUS footprint
37. AIID1.DAT -- Satellite transponder strapping table data
38. AIID2.DAT -- Overall equivalent link noise temperature and transmission gains

Naming of Data Element Mnemonics

Several of the data files for space station networks contain data elements that are actually lists of elements instead of a single element. Examples of these multiple element list are: emission designations, powers, frequencies, and associated earth stations. These element lists are noted with the phrase "(May be repeated 1-999 times)" in the following data element lists. The data element mnemonic for these elements should be incremented for each value in the list. For example, the list of data elements for the "Emission designation" and "Total peak power" (file number 3, mnemonics = RE001 & RP001) would actually be as follows:

```
RE001 36MOF9WXF  
RP001 30.0  
RE002 36MOG7W  
RP002 28.0  
RE003 1M24G7W  
RP003 -2.1  
RE004 38K4G7W  
RP004 -15.3  
etc.
```

FIGURE 2: FILE STRUCTURE FOR SPACE STATION IFRB DATA SUBMISSIONS



Data Elements Required for the International Coordination of Domestic and International Space Station Networks

FILE NUMBER 1 -- General Space Station Network Data and IFRB Characteristics of the Network, "AIIA.DAT"

NOTE: This data is for IFRB Form AP3/II-A (FCC Form 130/II-A, July 1990)

Definition	Mnemonics	Format	Example
Space station call sign	CSIGN	c7	KS34 or S2100
File number of current authorization	CAFNO	c17	123-DSS-P/LA-99
Licensee Name	ANAME	c80	XYZ Company, Inc.
Licensee mailing address-street	APM01	c40	123 N. Main St.
Licensee mailing address-city	APM02	c20	Anytown
Licensee mailing address-state	APM03	c2	TX
Licensee mailing address-zip code	APM04	c10	12345-1234
Licensee's IFRB Contact person	APCON	c40	John Doe
Licensee telephone area code	APT01	c3	123
Licensee telephone number	APM05	c8	123-4567
Date of submission	DAS01	mm/dy/year	03/14/1999
Administration serial number	ASN01	#####	?????????
Notifying Administration	NAMIN	ccc/ccc	USA
RR1488 Notification	R1488	c1 (Y,"")	
RR1060 Request for coordination	R1060	c1 (Y,"")	Y
RR1610 Agreement under Art. 14	R1610	c1 (Y,"")	
Request for assistance of the IFRB for RR1060 coordination	B1060	c1 (Y,"")	
Request for assistance of the IFRB for RR1610 coordination	B1610	c1 (Y,"")	
Notification intended for ADD/MOD/SUP	NOTIN	c3	ADD
First Notification	FINOT	c1 (Y,"")	Y
Resubmission	RESUB	c1 (Y,"")	
IFRB identification no. of network to be modified/deleted (resubmission only)	IFRID	c9	?????????

A. CHARACTERISTICS OF THE NETWORK

Name of the space station (IFRB name)	SNAME	c20	USASAT 77D
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4a. FOR GEOSTATIONARY SATELLITE ONLY

Nominal orbital longitude	NOLON	###.##E	101.00W
Longitudinal tolerance (TO WEST - degrees)	LTOLW	###	0.05
Longitudinal tolerance (TO EAST - degrees)	LTOLW	###	0.05
Inclination excursion (degrees)	INTOL	###	0.05
Visibility arc (FROM WEST - degrees)	VISIW	###E	132W
Visibility arc (FROM EAST - degrees)	VISIE	###E	60W
Service arc (FROM WEST - degrees)	SVACW	###E	132W
Service arc (FROM EAST - degrees)	SVACE	###E	60W
Attachment number explaining Reason for service arc < visibility arc	VISSV	##	

FILE NUMBER 1 -- General Space Station Network Data and IFRB Characteristics of the Network, "AIIA.DAT", continued:

Definition	Mnemonics Format	Example
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4b. FOR NON-GEOSTATIONARY SATELLITES ONLY

Inclination angle	INCLA ###.	
Orbital period (Days & Hours = ###D## or Hours & Minutes = ###H##)	PERID ###X## where X=D or H	
Apogee (kilometers)	APOGE #####	
Perigee (kilometers)	PERIG #####	
Reference body (blank for Earth, L=Moon, J=Jupiter, M=Mars, V=Venus, S=Sun)	RFBOD "", L, J, M, V, or S	
Number of satellites	NOSAT ##	

FILE NUMBER 2 -- Receiving Space Station Antenna Beam Details, "AIIB1.xxx" where "xxx" = "001" for first satellite beam, = "002" for second satellite beam, etc.

NOTE: This data is for IFRB Form AP3/II-B1 (FCC Form 130/II-B1, July 1990)

Definition	Mnemonics Format	Example
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CHARACTERISTICS OF THE RECEIVING ANTENNA BEAM

ADD/MOD/SUP of the beam	AMS01 c3	ADD
Receiving beam designation	SRBEM c3	UV1
Old beam designation (if changed)	SRBOD c3	

ANTENNA CHARACTERISTICS

Space station antenna maximum isotropic gain (dBi)	RSSGN ###.	28.0
Pointing accuracy (+/- degrees)	RSSPA #.##	0.10
Polarization	RSSPL c5	?????
Is antenna gain contours diagram included?	RSSGD c1 (Y,N)	Y
Is antenna radiation pattern diagram included?	RSSRD c1 (Y,N)	N
Is estimated antenna gain diagram vs. orbit longitude included?	RSSOG c1 (Y,N)	Y

INFORMATION COMMON TO THE FOLLOWING LISTS OF ASSIGNED FREQUENCIES OF THIS BEAM

Date of bringing into use	RSSDT mm/dd/year	12/31/1991
Period of validity (years)	RSSVP ##	10
Operating agency or company	RSSCO c80	Company Name
Administration responsible for the station	RSSAD c3	USA
Special section number (AR11/A/...) (RR1042)	RS11A c12	AR11/A/1234
Special section number (AR11/C/...) (RR1060)	RS11C c12	AR11/C/2345
Special section number (AR14/C/...) (RR1610)	RS14C c12	AR14/C/943
Other special section number (1 of 5 possible)	RSS01 c12	AR11/A/1993

**FILE NUMBER 2 -- Receiving Space Station Antenna Beam Details, "AIIB1.xxx",
continued:**

Definition	Mnemonics Format	Example
Other special section number (2 of 5 possible)	RSS02 c12	AR11/C/299
Other special section number (3 of 5 possible)	RSS03 c12	AR11/A/199
Other special section number (4 of 5 possible)	RSS04 c12	AR11/C/9936
Other special section number (5 of 5 possible)	RSS05 c12	AR11/A/193
Type of coordination agreement reached (1 of 5)	RSRR1 c6	RR1060
Type of coordination agreement reached (2 of 5)	RSRR2 c6	RR1610
Type of coordination agreement reached (3 of 5)	RSRR3 c6	RR----
Type of coordination agreement reached (4 of 5)	RSRR4 c6	RR----
Type of coordination agreement reached (5 of 5)	RSRR5 c6	RR----
List of countries with which coordination agreement has been reached (3-ltr symbols) (1 of 5)	RSCA1 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-ltr symbols) (2 of 5)	RSCA2 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-ltr symbols) (3 of 5)	RSCA3 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-ltr symbols) (4 of 5)	RSCA4 c30	---,---
List of countries with which coordination agreement has been reached (3-ltr symbols) (5 of 5)	RSCA5 c30	---,---
Type of coordination agreement sought (1 of 5)	RSRS1 c6	RR1060
Type of coordination agreement sought (2 of 5)	RSRS2 c6	RR----
Type of coordination agreement sought (3 of 5)	RSRS3 c6	RR----
Type of coordination agreement sought (4 of 5)	RSRS4 c6	RR----
Type of coordination agreement sought (5 of 5)	RSRS5 c6	RR----
List of countries with which coordination agreement has been sought (3-ltr symbols) (1 of 5)	RSCS1 c30	CAN,MEX,CUB
List of countries with which coordination agreement has been sought (3-ltr symbols) (2 of 5)	RSCS2 c30	---,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (3 of 5)	RSCS3 c30	---,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (4 of 5)	RSCS4 c30	---,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (5 of 5)	RSCS5 c30	---,---

FILE NUMBER 3 -- Receiving Space Station Antenna Beam Common Data, "AIIB2.xxx"
 where "xxx" = "001" for first satellite beam,
 = "002" for second satellite beam, etc.

NOTE: This data is for IFRB Form AP3/II-B2 (FCC Form 130/II-B2, July 1990)

Definition	Mnemonics Format	Example
Receiving beam designation	SRBEM c3	UV1

CHARACTERISTICS COMMON TO THE FOLLOWING LIST OF ASSIGNED FREQUENCIES

Class of station code (no. 1 of 2 possible)	CSRS1 c2	TC
Class of station code (no. 2 of 2 possible)	CSRS2 c2	TC
Nature of service code (no. 1 of 2 possible)	RSNS1 c2	CV
Nature of service code (no. 2 of 2 possible)	RSNS2 c2	CV
Assigned frequency band (bandwidth) (kHz)	RSSBW #####	36000
Receiving system noise temperature (Kelvin)	RSSNT #####	85
Service area (3-ltr country symbol) (1 of 8)	RSSA1 c3	USA
Service area (3-ltr country symbol) (2 of 8)	RSSA2 c3	AK
Service area (3-ltr country symbol) (3 of 8)	RSSA3 c3	HA
Service area (3-ltr country symbol) (4 of 8)	RSSA4 c3	
Service area (3-ltr country symbol) (5 of 8)	RSSA5 c3	
Service area (3-ltr country symbol) (6 of 8)	RSSA6 c3	
Service area (3-ltr country symbol) (7 of 8)	RSSA7 c3	
Service area (3-ltr country symbol) (8 of 8)	RSSA8 c3	
Is service area diagram included?	RSSAE c1	N

TRANSMITTING STATION(S) ASSOCIATED WITH THE LIST OF ASSIGNED FREQUENCIES BELOW

EMISSIONS OF THE ASSOCIATED TRANSMITTING STATION(S) (May be repeated 1-999 times)

Emission designation	RE001 c9	36MOF9WXP
Total Peak Power (dBW)	RPO01 ##.#	30.0
Maximum power density (dBW/Hz)	RDO01 ###.#	-35.0

ASSOCIATED TRANSMITTING EARTH STATION(S) (may be repeated 1-999 times)

ADD/MOD/SUP of the earth station	1T001 c3	ADD
Earth station name	2T001 c20	Tulsa # 2
Country	3T001 c3	USA
Type of station (Specific or Typical)	4T001 c1 (S,T)	S
Earth station geographic latitude (degrees)	5T001 ## (0-90)	36
Earth station geographic latitude (minutes)	6T001 ## (0-59)	06
Earth station geographic latitude (seconds)	7T001 ## (0-59)	05
Earth station geographic latitude (hemisphere)	8T001 c1 (N,S)	N
Earth station geographic longitude (degrees)	9T001 ###(0-180)	095
Earth station geographic longitude (minutes)	1U001 ## (0-59)	55
Earth station geographic longitude (seconds)	2U001 ## (0-59)	26
Earth station geographic longitude (hemisphere)	3U001 c1 (E,W)	W
Class of station code (no. 1 of 2 possible)	4U001 c2	TC
Class of station code (no. 2 of 2 possible)	5U001 c2	TC

FILE NUMBER 3 -- Receiving Space Station Antenna Beam Common Data, "A1IB2.xxx", continued:

Definition	Mnemonics Format	Example
Nature of service code (no. 1 of 2 possible)	6U001 c2	CV
Nature of service code (no. 2 of 2 possible)	7U001 c2	CV
Earth stn. antenna maximum isotropic gain (dBi)	8U001 ###.#	53.1
Antenna half-power beamwidth (degrees)	9U001 ###.##	0.37
Radiation reference pattern	1V001 c12	REC465-1
Is antenna radiation pattern diagram included?	2V001 c1 (Y,N)	N

TRANSMITTING EARTH STATION ANTENNA RADIATION PATTERN DIAGRAM DATA
(If 2Vxxx is "Yes").

[NOTE: This pattern data may be repeated 1-999 times for each of the associated transmitting earth stations provided in this data file. In order to keep patterns with the correct earth station, this pattern data should follow directly after its associated transmitting earth station.]

Number of data points for the radiation pattern NP001 ##### 3600

"NP001" rows with the following information on each row:

Point number (1-NP001), Off-axis angle (-180 to 180 degrees),
and associated co-polar TES antenna gain value (dBi):

Format: "##### ###.# ###.#" (spaces between values)

Example: NP001 3600

```

00001 -180.0 -10.0
00002 -179.9 -12.1
      o       o
01800   0.0  53.1
      o       o
03599  179.8 -14.4
03600  179.9 -12.2

```

ASSOCIATED TRANSMITTING SPACE STATION (may be repeated 1-999 times)

ADD/MOD/SUP of the space station	3V001 c3	ADD
Space station name	4V001 c20	USASAT 76B
Transmitting antenna beam designation	5V001 c3	IST
Type of station (Geostationary or Non-Geo.)	6V001 c1 (G,N)	N

LIST OF ASSIGNED FREQUENCIES HAVING THE ABOVE COMMON CHARACTERISTICS
(May be repeated 1-999 times)

ADD/MOD/SUP of the frequency assignment	7V001 c3	ADD
Assigned frequency with units [(k/M/G)Hz]	8V001 #####.##### c3	3720.0 MHz
IFRB identification number for modifications/suppression	9V001 c9	??????????

FILE NUMBER 4 -- Transmitting Space Station Antenna Beam Details, "AIIC1.xxx"
 where "xxx" = "001" for first satellite beam,
 = "002" for second satellite beam, etc.

NOTE: This data is for IFRB Form AP3/II-C1 (FCC Form 130/II-C1, July 1990)

Definition	Mnemonics Format	Example
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CHARACTERISTICS OF THE TRANSMITTING ANTENNA BEAM

ADD/MOD/SUP of the beam	AMS02 c3	ADD
Transmitting beam designation	STBEM c3	UV1
Old beam designation (if changed)	STBOD c3	

ANTENNA CHARACTERISTICS

Space station antenna maximum isotropic gain (dBi)	TSSGN ###.#	28.0
Pointing accuracy (+/- degrees)	TSSPA #.##	0.10
Polarization	TSSPL c5	?????
Is antenna gain contours diagram included?	TSSGD c1 (Y,N)	Y
Is antenna radiation pattern diagram included?	TSSRD c1 (Y,N)	N
Is estimated antenna gain diagram vs. orbit longitude included?	TSSOG c1 (Y,N)	Y

INFORMATION COMMON TO THE FOLLOWING LISTS OF ASSIGNED FREQUENCIES IN THIS BEAM

Date of bringing into use	TSSDT mm/dd/year	12/31/1991
Period of validity (years)	TSSVP ##	10
Operating agency or company	TSSCO c80	Company Name
Administration responsible for the station	TSSAD c3	USA
Special section number (AR11/A/...) (RR1042)	TS11A c12	AR11/A/1234
Special section number (AR11/C/...) (RR1060)	TS11C c12	AR11/C/2345
Special section number (AR14/C/...) (RR1610)	TS14C c12	AR14/C/943
Other special section number (1 of 5 possible)	TSS01 c12	AR11/A/1993
Other special section number (2 of 5 possible)	TSS02 c12	AR11/C/299
Other special section number (3 of 5 possible)	TSS03 c12	AR11/A/199
Other special section number (4 of 5 possible)	TSS04 c12	AR11/C/9936
Other special section number (5 of 5 possible)	TSS05 c12	AR11/A/193
Type of coordination agreement reached (1 of 5)	TSRR1 c6	RR1060
Type of coordination agreement reached (2 of 5)	TSRR2 c6	RR1610
Type of coordination agreement reached (3 of 5)	TSRR3 c6	RR----
Type of coordination agreement reached (4 of 5)	TSRR4 c6	RR----
Type of coordination agreement reached (5 of 5)	TSRR5 c6	RR----
List of countries with which coordination agreement has been reached (3-1tr symbols) (1 of 5)	TSCA1 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-1tr symbols) (2 of 5)	TSCA2 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-1tr symbols) (3 of 5)	TSCA3 c30	CAN,MEX
List of countries with which coordination agreement has been reached (3-1tr symbols) (4 of 5)	TSCA4 c30	---,---

FILE NUMBER 4 -- Transmitting Space Station Antenna Beam Details, "AIIC1.xxx", continued:

Definition	Mnemonics Format	Example
List of countries with which coordination agreement has been reached (3-ltr symbols) (5 of 5)	TSCA5 c30	---,---
Type of coordination agreement sought (1 of 5)	TSRS1 c6	RR1060
Type of coordination agreement sought (2 of 5)	TSRS2 c6	RR----
Type of coordination agreement sought (3 of 5)	TSRS3 c6	RR----
Type of coordination agreement sought (4 of 5)	TSRS4 c6	RR----
Type of coordination agreement sought (5 of 5)	TSRS5 c6	RR----
List of countries with which coordination agreement has been sought (3-ltr symbols) (1 of 5)	TSCS1 c30	CAN,MEX,CUB
List of countries with which coordination agreement has been sought (3-ltr symbols) (2 of 5)	TSCS2 c30	---,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (3 of 5)	TSCS3 c30	---,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (4 of 5)	TSCS4 c30	---,---
List of countries with which coordination agreement has been sought (3-ltr symbols) (5 of 5)	TSCS5 c30	---,---

FILE NUMBER 5 -- Transmitting Space Station Antenna Beam Common Data, "AIIC2.xxx"
 where "xxx" = "001" for first satellite beam,
 = "002" for second satellite beam, etc.

NOTE: This data is for IFRB Form AP3/II-C2 (FCC Form 130/II-C2, July 1990)

Definition	Mnemonics Format	Example
Transmitting beam designation	STBEM c3	UV1

CHARACTERISTICS COMMON TO THE FOLLOWING LIST OF ASSIGNED FREQUENCIES

Class of station code (no. 1 of 2 possible)	CSTS1 c2	TC
Class of station code (no. 2 of 2 possible)	CSTS2 c2	TC
Nature of service code (no. 1 of 2 possible)	TSNS1 c2	CV
Nature of service code (no. 2 of 2 possible)	TSNS2 c2	CV
Assigned frequency band (bandwidth) (kHz)	TSSBW #####	36000
Service area (3-ltr country symbol) (1 of 8)	TSSA1 c3	USA
Service area (3-ltr country symbol) (2 of 8)	TSSA2 c3	AK
Service area (3-ltr country symbol) (3 of 8)	TSSA3 c3	HA
Service area (3-ltr country symbol) (4 of 8)	TSSA4 c3	
Service area (3-ltr country symbol) (5 of 8)	TSSA5 c3	
Service area (3-ltr country symbol) (6 of 8)	TSSA6 c3	
Service area (3-ltr country symbol) (7 of 8)	TSSA7 c3	
Service area (3-ltr country symbol) (8 of 8)	TSSA8 c3	
Is service area diagram included?	TSSAE c1	N

**FILE NUMBER 5 -- Transmitting Space Station Antenna Beam Common Data,
"AIIIC2.xxx", continued:**

Definition	Mnemonics Format	Example
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SPACE STATION EMISSIONS AND RECEIVING STATION(S) APPLICABLE TO THE LIST OF
ASSIGNED FREQUENCIES BELOW

SPACE STATION EMISSIONS (May be repeated 1-999 times)

Emission designation	TE001 c9	36MOF9WXF
Total Peak Power (dBW)	TP001 ##.#	10.0
Maximum power density (dBW/Hz)	TD001 ###.#	-70.0

ASSOCIATED RECEIVING EARTH STATION(S) (may be repeated 1-999 times)

ADD/MOD/SUP of the earth station	1R001 c3	ADD
Earth station name	2R001 c20	Tulsa # 2
Country	3R001 c3	USA
Type of station (Specific or Typical)	4R001 c1 (S,T)	S
Earth station geographic latitude (degrees)	5R001 ## (0-90)	36
Earth station geographic latitude (minutes)	6R001 ## (0-59)	06
Earth station geographic latitude (seconds)	7R001 ## (0-59)	05
Earth station geographic latitude (hemisphere)	8R001 c1 (N,S)	N
Earth station geographic longitude (degrees)	9R001 ### (0-180)	095
Earth station geographic longitude (minutes)	1S001 ## (0-59)	55
Earth station geographic longitude (seconds)	2S001 ## (0-59)	26
Earth station geographic longitude (hemisphere)	3S001 c1 (E,W)	W
Receiving system noise temperature (kelvin)	4S001 #####	90
Class of station code (no. 1 of 2 possible)	5S001 c2	TC
Class of station code (no. 2 of 2 possible)	6S001 c2	TC
Nature of service code (no. 1 of 2 possible)	7S001 c2	CV
Nature of service code (no. 2 of 2 possible)	8S001 c2	CV
Earth stn. antenna maximum isotropic gain (dBi)	9S001 ###.#	53.1
Antenna half-power beamwidth (degrees)	1Q001 ###.##	0.37
Radiation reference pattern	2Q001 c12	REC465-1
Is antenna radiation pattern diagram included?	3Q001 c1 (Y,N)	N

RECEIVING EARTH STATION ANTENNA RADIATION PATTERN DIAGRAM DATA
(If 3Qxxx is "Yes").

[NOTE: This pattern data may be repeated 1-999 times for each of the
associated receiving earth stations provided in this data file. In order to
keep patterns with the correct earth station, this pattern data should follow
directly after its associated receiving earth station.]

**FILE NUMBER 5 -- Transmitting Space Station Antenna Beam Common Data,
"AIIIC2.xxx", continued:**

Definition	Mnemonics Format	Example
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Number of data points for the radiation pattern	NP001 #####	3600
---	-------------	------

"NP001" rows with the following information on each row:

Point number (1-NP001), Off-axis angle (-180 to 180 degrees),
and associated co-polar RES antenna gain value (dBi):
Format: "#####.###.###" (spaces between values)

Example: NP001 3600
00001 -180.0 -10.0
00002 -179.9 -12.1
0 0 0
01800 0.0 47.1
0 0 0
03599 179.8 -14.4
03600 179.9 -12.2

ASSOCIATED RECEIVING SPACE STATION(S) (may be repeated 1-999 times)

ADD/MOD/SUP of the space station	4Q001 c3	ADD
Space station name	5Q001 c20	USASAT 76B
Transmitting antenna beam designation	6Q001 c3	IST
Type of station (Geostationary or Non-Geo.)	7Q001 c1 (G,N)	N

LIST OF ASSIGNED FREQUENCIES HAVING THE ABOVE COMMON CHARACTERISTICS
(May be repeated 1-999 times)

ADD/MOD/SUP of the frequency assignment	8Q001 c3	ADD
Assigned frequency with units [(k/M/G)Hz]	9Q001 #####.##### c3	5945.0 MHz
IFRB identification number for modifications/suppression	1X001 c9	?????????

FILE NUMBER 6 -- Overall Link Characteristics: (Strapping Table) "A3IID1.DAT"

NOTE: This data is for IFRB Form AP3/II-D (FCC Form 130/II-D, July 1990)

STRAPPING (CONNECTION) BETWEEN UPLINK AND DOWNLINK FREQUENCY ASSIGNMENTS FOR
EACH INTENDED COMBINATION OF RECEIVING AND TRANSMITTING BEAMS
(May be repeated 1-999 times)

Definition	Mnemonics Format	Example
Serial Number	1B001 ###	001
ADD/MOD/SUP of the strap	2B001 c3	ADD
Beam Combination: Uplink Beam designation	3B001 c3	UV1
Beam Combination: Downlink Beam designation	4B001 c3	DH1
Uplink Assigned frequency and units [(k/M/G)Hz]	5B001 #####.##### c3	5945.0 MHz
Downlink Assigned frequency & units [(k/M/G)Hz]	6B001 #####.##### c3	3720.0 MHz

FILE NUMBER 7 -- Overall Link Characteristics: (Equivalent satellite link noise temperatures and associated transmission gains) "A3IID2.DAT"

NOTE: This data is for IFRB Form AP3/II-D, (FCC Form 130/II-D, July 1990)

EQUIVALENT SATELLITE LINK NOISE TEMPERATURE AND ASSOCIATED TRANSMISSION GAINS FOR EACH ENTRY IN TABLE D1 (A3IID1.DAT) (May be repeated 1-999 times)

<u>Definition</u>	<u>Mnemonics Format</u>	<u>Example</u>
Starting reference serial number in table d1	1A001 ###	001
Ending reference serial number in table d1	2A001 ###	024
A1. Lowest equivalent satellite link noise temperature (kelvin)	3A001 #####	135
A2. Associated transmission gain for A1 (dB)	4A001 ###.#	-17.9
B1. Satellite link noise temperature for highest ratio of Gain/Noise (kelvin)	5A001 #####	170
B2. Associated transmission gain for B1 (dB)	6A001 ###.#	-11.2
Associated earth station name	7A001 c15	Typical 7M

FILE NUMBER 8 — RSS & TSS Antenna Gain Contours (FOOTPRINTS) "FOOTPRINT.xxx"
 where "xxx" = "001" for first satellite beam,
 = "002" for second satellite beam, etc.

NOTE: The antenna gain contour and boresite data provided here should be in the form of pitch and roll angles in degrees as seen from the space craft. These contours should be continued off the face of the Earth if at all possible. Contours that correspond to a gain of 2, 4, 6, 10 and 20 dB below the maximum isotropic gain, and at 10 dB intervals thereafter as necessary, are to be supplied. The points where the antenna gain is maximum (center of the beam) or maximum locally (center of sub-beams) are referred to here as "boresites". There can be multiple "boresites" as well as multiple contours with the same gain value (i.e. two contours each with a gain of -2 dB).

Definition	Mnemonics Format	Example
Receiving or transmitting beam designation	BEMID c3	UV1
Total number of boresite points (relative maxima)	NBS ###	2
Total number of gain contours	NCTR ###	10

BORESITE GAIN(S) AND LOCATION(S) (May be repeated 1-99 times)

Isotropic gain at the boresite location (dBi)	GMX01 #####.##	28.00
Pitch angle to boresite from satellite (degrees)	PCH01 #####.##	1.17
Roll angle to boresite from satellite (degrees)	ROL01 #####.##	5.93

ANTENNA GAIN CONTOUR(S) (May be repeated 1-99 times)

Relative gain of contour (dB down from max. gain)	GAN01 #####.##	-2.00
Flag to indicate whether contour is open (=0) or closes (=1) upon itself. If closed, the last and first contour data points should be equal.	IOP01 ####	1
Number of data points for this contour	NPT01 ####	27

CONTOUR PITCH AND ROLL DATA POINTS (Must be repeated 1-"NPT01" times)

NOTE: xxPyy and xxRyy where "xx" = contour number from 01-99, and
 "yy" = point number on contour from 01-99.

Pitch angle to point on contour (degrees)	01P01 #####.##	1.08
Roll angle to point on contour (degrees)	01R01 #####.##	7.62

FILE NUMBER 9 -- RSS & TSS Antenna Radiation Pattern "RADPATTN.xxx"
 where "xxx" = "001" for first satellite beam,
 = "002" for second satellite beam, etc.

NOTE: The satellite antenna radiation pattern provided here is required for beams on geostationary satellites directed toward other satellites and for non-geostationary space craft. This radiation pattern is assumed to be rotationally symmetrical.

Definition	Mnemonics Format	Example
Receiving or transmitting beam designation	BEMID c3	UV1
Number of data points for the radiation pattern	NPNTS #####	3600

"NPNTS" rows with the following information on each row:

Point number (1-NPNTS), Off-axis angle (-180 to 180 degrees),
 and associated co-polar RSS or TSS antenna gain value (dBi):

Format: "##### ###.## ##.##" (spaces between values)

Example: BEMID UV1
 NPNTS 3600
 00001 -180.0 -10.0
 00002 -179.9 -10.0
 o o o
 01800 0.0 45.0
 o o o
 03599 179.8 -10.0
 03600 179.9 -10.0

FILE NUMBER 10 -- RSS & TSS Estimated Antenna Gain vs. Orbit Longitude

"CANVSORS.xxx"

where "xxx" = "001" for first satellite beam,
= "002" for second satellite beam, etc.

NOTE: This estimated antenna gain vs. orbit longitude diagram is required for those satellite antenna beams on geostationary satellites operating in frequency bands that are allocated for bi-directional satellite usage (i.e. 14 GHz band). Information to be provided is the estimated isotropic antenna gain in dBi towards the geostationary satellite orbit, in directions which are not obstructed by the Earth. Gain values should be provided for orbit longitudes from 0-360 degrees East longitude. Gain values of -99.0 dBi should be provided for the portion of the geostationary orbit that is shadowed by the Earth.

Definition	Mnemonics Format	Example
Receiving or transmitting beam designation	BEMID c3	UV1
Number of data points for the estimated pattern	NPNTS #####	360
"NPNTS" rows with the following information on each row: Point number (1-NPNTS), Orbital longitude (-180 to 180 degrees or 0 to 360 degrees East longitude), and estimated isotropic antenna gain toward that orbital longitude (dBi): Format: "#####.###.##" (spaces between values)		

Example: BEMID UV1
NPNTS 360
00001 0.0 -10.0
00002 1.0 -10.0
o o o
00180 179.0 -99.0
o o o
00359 358.0 -10.0
00360 359.0 -10.0